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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/643,221   | 08/19/2003  | Yasuhiro Yoshioka    | 2870-0264P          | 3448             |
| 2292   | 7590        | 01/11/2006           | EXAMINER            |                  |
| BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      | CHEA, THORL         |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 1752                |                  |
| DATE MAILED: 01/11/2006  |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/643,221

Applicant(s)

YOSHIOKA ET AL.

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7,8,10 and 11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5,7,8,10 and 11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 20, 2005 has been entered.

2. Claims 1-5, 7-8, 10-11 are pending; claims 6 and 9 have been canceled.

#### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-5, 8-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed fails to exclude "R<sup>43</sup>" that represent an alkyl group, an aryl group as part of the ring formation, but not "R<sup>43</sup>" as -N(R<sup>44</sup>)(R<sup>45</sup>) as part of the ring. Therefore, the deletion of "R<sup>43</sup>" is considered as negative limitation to the specification as originally filed, and therefore, raises the issue of new matter.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-5, 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is confusing with respect to the claiming of R41, R42, R44 and R<sup>45</sup> may be taken together to form a ring since R43 is excluded as part of the ring, but R44 and R45 which is R3 is still part of the ring. Therefore, it is unclear whether it is still intended to claim R43 as part of the ring or otherwise.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

9. Claims 1-5, 8-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kirk et al (U.S. Patent No. 5,460,938).

The invention as claimed has been known in Kirk in columns 12-13, claims 1-6. See the compound in column 5, compounds (iv), (vii), (viii). These compounds which are read on the

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compound of formula (IV) wherein two or more of  $R^{41}$ ,  $R^{42}$ ,  $R^{43}$ ,  $R^{44}$ , and  $R^{45}$  may be taken together to form a ring. The material of Kirk contains compound within the scope of formula (IV) of the claimed invention. Kirk fails to state that the compound meet the requirement in A., but due to the similarity of the structure, the condition in A would be inherent to compound of formula in claim 1 of Kirk, and in the absence of showing otherwise, it is asserted that the invention as claimed would be anticipated or found obvious to the worker of ordinary skill in the art.

10. Claims 1-5, 8-11 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Miura et al (U.S. Patent No. 6,248,512).

Miura discloses a photothermographic material having composition similar to that of the claimed invention. Note for instance the material in column 47-50, example 1, and sample in Table 1, which contains a phenol compound as reducing agent. The hindered phenol compounds are preferred reducing agent is disclosed in column 31-32. The compounds in columns 12-14 which are read on the compound of formula (IV) wherein two or more of  $R^{41}$ ,  $R^{42}$ ,  $R^{43}$ ,  $R^{44}$ , and  $R^{45}$  may be taken together to form a ring. These compounds are similar to that of the groups presented in the specification as having hydrogen bond formation rate constant  $k_f$  of 20-4000. Thus, the compound having having hydrogen bond formation rate constant  $k_f$  of 20-4000 presented in the claimed invention is inherent to that taught in Miura. In the absence of showing otherwise, the examiner asserts that the claimed invention is either anticipated or would have been prima facie obvious over Miura.

11. Claims 1-5, 7-8, 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Bojora et al (US Patent No 3,667,959). See Bojora et al, column 3, lines 10, 20, 65; column 5, lines 5-

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10; column 5, lines 34-63; columns 12-14, claims 1-27. Bojora et al discloses a photothermographic material containing sulfonyl group including that claimed in the present claimed invention in a photothermographic material such as the preferred compound in column 3, lines 10, 30. Therefore, the claimed invention lacks novelty. Alternatively, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the non-aqueous polar organic solvent taught there to enhance the maximum image density of a photothermographic material, and thereby provide a material as claimed.

***Response to Arguments***

12. Applicant's arguments filed on October 20, 2005 have been fully considered but they are not persuasive because of the reason set forth above because of the reason set forth in the rejection above. There is no difference between the compounds taught in the applied prior art of record such as Miura et al and Kirk et al. The compound of formula (IV) is within the scope of the compound taught in Miura et al. See for instance the compound in column 15, compound B1. This compound is within the scope of the claimed compound when R41, 42 and R43 is an alkyl group. See also compound B2 to B5; B9 to B12. The compound A-42 presented in the argument is within the scope of the claimed invention since it contains a carbonyl group and the nitrogen ring which is within the scope of the ring claimed in the present claimed invention. See the language R41, R42, R44 and R45 may be taken together to form a ring. These substituents R41, R42, R44 and R45 can be any substituents other than those previously recited such as alkyl, aryl or other groups represent R41, R42, R43, R44 and R45. The scope of the compound encompasses any compound having a carbonyl group and nitrogen as part of the ring. Likewise,

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the claimed compound is still read on the compound taught in Kirk et al R41, R42, R44 and R45 may be taken together to form a ring.

13. The rejection of claims 1-5, 7-11 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,696,237 is withdrawn in view of the applicants' argument presented on August 22, 2005.

***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea *th*  
December 30, 2005

*Thorl Chea*  
Thorl Chea  
Primary Examiner  
Art Unit 1752